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Comparative analysis of antioxidant and antiproliferative activities of *Rhodomlyrtus tomentosa* extracts prepared with various solvents



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ABSTRACT

Rhodomlyrtus tomentosa (Aiton) Hassk. has a wide spectrum of pharmacological effects and has been used to treat wounds, colic diarrhoea, heartburns, abscesses and gynaecopathy. The potential antiproliferative activities of *R. tomentosa* extracts from different solvents were evaluated in vitro on HepG2, MCF-7 and HT 29 cell lines while antioxidant activity was monitored by radical scavenging assay (DPPH), copper reducing antioxidant capacity (CUPRAC) and β -carotene bleaching assay. Extracts from *R. tomentosa* show the viability of the cells in concentration-dependent manner. According to the IC₅₀ obtained, the ethyl acetate extracts showed significant antiproliferative activity on HepG2 (IC₅₀ 11.47 \pm 0.280 μ g/mL), MCF-7 (IC₅₀ 2.68 \pm 0.529 μ g/mL) and HT 29 (IC₅₀ 16.18 \pm 0.538 μ g/mL) after 72 h of treatment. Bioassay guided fractionation of the ethyl acetate extract led to the isolation of lupeol. Methanol extracts show significant antioxidant activities in DPPH (EC₅₀ 110.25 \pm 0.005 μ g/ml), CUPRAC (EC₅₀ 53.84 \pm 0.004) and β -carotene bleaching (EC₅₀ 58.62 \pm 0.001) due to the presence of high total flavonoid and total phenolic content which were 110.822 \pm 0.017 mg butylated hydroxytoluene (BHT)/g and 190.467 \pm 0.009 mg gallic acid (GAE)/g respectively. Taken together, the results extracts show the *R. tomentosa* as a potential source of antioxidant and antiproliferative efficacy.